

1 What is claimed is:

2 1. A vertical film cassette positioner for a child positioning  
3 apparatus for X-ray photography comprising:

4 (a) an L-angle having a vertical portion and a horizontal  
5 portion;

6 (b) a vertical groove in the vertical portion of the  
7 L-angle;

8 (c) a film cassette tray;

9 (d) a right and left tray guide attached to the tray for  
10 slidably guiding the tray along the vertical portion of the  
11 L-angle; and

12 (e) a pass through fastener having a first end attached to  
13 the tray and a connecting portion passing through the vertical  
14 groove to a control portion for engaging and disengaging the  
15 cassette tray with the vertical portion.

16 2. The vertical film cassette positioner of claim 1 wherein the  
17 control portion of the pass through fastener is a dial knob.

18 3. The vertical film cassette positioner of claim 1 wherein the  
19 horizontal portion of the L-angle is mounted in a block attached  
20 to a top of the child positioning apparatus.

21 4. The vertical X-ray cassette positoner of claim 3 wherein the  
22 horizontal portion of the L-angle, has a groove and a second pass  
23 through fastener with a control portion, a connecting portion  
24 passing through the horizontal groove and a first end attached to  
25 the block.

1 5. An upright restraint locking mechanism for a child  
2 positioning apparatus for X-ray photography comprising:

3 (a) a slide block having a top, bottom, a front, a rear, and  
4 two opposing side surfaces;

5 (b) a channel open to the top of the slide block and  
6 connecting the two opposing side surfaces;

7 (c) a divider separating the channel creating a first sub-  
8 channel and a second sub-channel;

9 (d) a first spring loaded guide having a slide for enclosing  
10 the first sub-channel between the slide and the divider; and

11 (e) a second spring loaded guide having a slide for  
12 enclosing the second sub-channel between the slide and the  
13 divider.

14 6. The upright restraint locking mechanism of claim 5 wherein  
15 the slide block is made of ultra high molecular weight  
16 polyethylene.

17 7. An adjustable indicator plate mechanism for a child  
18 positioning apparatus comprising:

19 (a) a guide attached to the positioning apparatus;

20 (b) a mounting plate having a front side and a rear side  
21 said mounting plate having a vertical groove centered on the  
22 mounting plate and being vertically moveable with respect to the  
23 guide;

24 (c) a lead sheild attached to the mounting plate;

25 (d) a pass through fastener having a control portion, a  
26 connecting portion passing through the mounting plate vertical

1 groove and an end portion engaging the positioning apparatus,  
2 wherein the control portion is operable to engage and disengage  
3 the mounting plate and thereby allow it to be fixed in a desired  
4 position relative to the child positioning apparatus.

5 8. The adjustable indicator plate mechanism of claim 7 wherein  
6 the lead shield has indicia markers rotatably attached.

7 9. The adjustable indicator plate mechanism of claim 7 wherein  
8 the control portion of the pass through fastener is a dial knob.

9 10. An upright restraint fastening mechanism for a child  
10 positioning apparatus comprising;

11 (a) a first upright restraint;

12 (b) a strap attached to the first upright said strap having  
13 a first side comprising a first fastenable material and a second  
14 side ; and

15 (c) a second upright restraint having a second fastenable  
16 material attached thereon wherein the first and second fastenable  
17 materials may be removably connected.

18 11. The upright restraint fastening mechanism for a child  
19 positioning apparatus of claim 10 wherein the second side of the  
20 first strap comprises the second fastenable material and when the  
21 first strap is wrapped around the first upright restraint and the  
22 second upright restraint the first fastenable material of the  
23 strap is removably connected to the second fastenable material of  
24 the strap.

25 12. The upright restraint fastening mechanism for a child  
26 positioning apparatus of claim 10 wherein the first fastenable

1 material is loop material and said second fastenable material is  
2 hook material.

3 13. The upright restraint fastening mechanism of claim 11  
4 wherein said first fastenable material is hook material and said  
5 second fastenable material is loop material.

6 14. A turntable latch mechanism for fixing the turntable of a  
7 child positioning apparatus comprising:

8 (a) a lock hole positioned on the perimeter of the  
9 turntable;

10 (b) a lock mechanism mounted on a top of the child  
11 positioning apparatus proximal to the perimeter of the turntable  
12 comprising:

13 i) a shaft for engaging the lock hole; and

14 ii) a lock tab in communication with the lock shaft for  
15 activating the lock shaft by causing it to move forward  
16 toward the perimeter of the turntable and for deactivating  
17 the lock shaft by causing it to move rearward away from the  
18 turntable.

19 15. The turntable latch mechanism of claim 14 further comprising  
20 the addition of indicia on the top corresponding to degrees of  
21 rotation of the turntable from a home position.

22 16. An adjustable seat mechanism supported by a turntable for  
23 use with a child positioning apparatus the adjustable seat  
24 comprising:

25 (a) a seat;

1 (b) a seat stand attached to the seat having a  
2 plurality of engagement contacts;

3 (c) a seat lock for retractably engaging an engagement  
4 contact; and

5 (d) a seat lock cover attached to the turntable  
6 proximal to the seat lock for preventing the application of  
7 leverage to an engaged seat lock when the seat lock is moved  
8 indirectly by movement of the seat stand.

9 17. The adjustable seat mechanism of claim 16 wherein said  
10 plurality of engagement contacts are serrations in said seat  
11 stand.

12 18. An upright restraint fastening mechanism supported by a  
13 turntable for a child positioning apparatus comprising;

14 (a) a first upright restraint having a first wing brace for  
15 standing the first upright on a top of the turntable;

16 (b) a strap attached to the first upright said strap having  
17 a first side comprising a first fastenable material and a second  
18 side ;

19 (c) a second upright restraint having a second wing brace  
20 for standing the second upright on the turntable top said second  
21 upright restraint having a second fastenable material attached  
22 thereon wherein the first and second fastenable materials may be  
23 removably connected;

24 (d) a first wing clamp rotatably attached to the turntable  
25 proximal to the first wing brace for engaging said first wing  
26 brace and a second wing clamp rotatably attached to the turntable

1 proximal to the second wing brace for engaging said second wing  
2 brace.

3 19. The upright restraint fastening mechanism of claim 18  
4 wherein the turntable top has an upright restraint pad between  
5 the first upright restraint and said turntable and the second  
6 upright restraint and said turntable.

7 20. The upright restraint fastening mechanism of claim 19  
8 wherein said upright restraint pad is made of an elastomer.

9 21. A child positioning apparatus having a rotatable turntable  
10 comprising:

11 (a) A vertical film cassette positioner comprising:

12 (i) an L-angle having a vertical portion and a  
13 horizontal portion said horizontal portion mounted in a block  
14 attached to a top of the child positioning apparatus;

15 (ii) a vertical groove in the vertical portion of the  
16 L-angle;

17 (iii) a film cassette tray;

18 (iv) a right and left tray guide attached to the tray  
19 for slidably guiding the tray along the vertical portion of the  
20 L-angle;

21 (v) a dial knob having a first end attached to the tray  
22 and a connecting portion passing through the vertical groove to a  
23 control portion for engaging and disengaging the cassette tray  
24 with the vertical portion;

25 (b) a second dial knob with a control portion, a connecting  
26 portion passing through the horizontal portion of the L-angle

1 said horizontal portion having a groove and a first end attached  
2 to the block;

3 (c) an upright restraint fastening mechanism supported by  
4 the turntable comprising;

5 (i) a first upright restraint having a first wing brace  
6 for standing the first upright on a top of the turntable;

7 (ii) a strap attached to the first upright said strap  
8 having a first side comprising a first fastenable material and a  
9 second side ;

10 (iii) a second upright restraint having a second wing  
11 brace for standing the second upright on the turntable top said  
12 second upright restraint having a second fastenable material  
13 attached thereon wherein the first and second fastenable  
14 materials may be removably connected;

15 (iv) a first wing clamp rotatably attached to the  
16 turntable proximal to the first wing brace for engaging said  
17 first wing brace and a second wing clamp rotatably attached to  
18 the turntable proximal to the second wing brace for engaging said  
19 second wing brace;

20 (v) at least one upright restraint pad between said  
21 first upright restraint and the turntable and said second upright  
22 restraint and the turntable;

23 (d) an adjustable indicator plate comprising:

24 (i) a guide attached to the positioning apparatus;

1 (ii) a mounting plate having a front side and a rear  
2 side said mounting plate having a vertical groove on the mounting  
3 plate and being vertically moveable with respect to the guide;

4 (iii) a sheild attached to the mounting plate;

5 (iv) a third dial knob having a control portion, a  
6 connecting portion passing through the mounting plate vertical  
7 groove and an end portion engaging the positioning aparatus,  
8 wherein the control portion is operable to engage and disengage  
9 the mounting plate and thereby allow it to be fixed in a desired  
10 position relative to the child positioning apparatus;

11 (e) a turntable latch mechanism comprising:

12 (i) a lock hole positioned on the perimeter of the  
13 turntable;

14 (ii) a lock mechanism mounted on the top of the child  
15 positioning apparatus proximal to the perimeter of the turntable  
16 comprising:

17 (1) a shaft for engaging the lock hole; and

18 (2) a lock tab in communication with the lock  
19 shaft for activating the lock shaft by causing it  
20 to move forward toward the perimeter of the  
21 turntable and for deactivating the lock shaft by  
22 causing it to move rearward away from the  
23 turntable.

24 (f) an adjustable seat mechanism comprising:

25 (i) a seat;



1           (ii) a seat stand attached to the seat having a  
2     plurality of engagement contacts;  
3           (iii) a seat lock for retractably engaging an  
4     engagement contact; and  
5           (iv) a seat lock cover attached to the turntable  
6     proximal to the seat lock for preventing the application of  
7     leverage to an engaged seat lock when the seat lock is moved  
8     indirectly by movement of the seat stand.

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